

LPWAN WG

WG Chairs:

Alexander Pelov <a@ackl.io>

Pascal Thubert <pthubert@cisco.com>

AD: Suresh Krishnan
<suresh@kaloom.com>

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Reminder:

Minutes are taken *

This meeting is recorded **

Presence is logged ***

- * Scribe; please contribute online to the minutes at: <http://etherpad.tools.ietf.org:9000/p/lpwan>
- ** Recordings and Minutes are public and may be subject to discovery in the event of litigation.
- *** From the Webex login

Agenda bashing

- 16:05> Opening, agenda bashing (Chairs) [10min]
- Note-Well, Scribes, Agenda Bashing
 - Approval minutes from last meeting
 - Review last interim todos
 - Terminology
- 16:15> LPWAN Overview Presentation and Discussion (Stephen Farrel) [5min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-overview/>
 - WGLC
- 16:20> Static Context Header Fragmentation (Carles) [15min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-ipv6-static-context-hc/>
- 16:35> Static Context Header Compression for IPv6 and UDP (Ana, Laurent) [15min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-ipv6-static-context-hc/>
- 16:50> LPWAN Static Context Header Compression (SCHC) for CoAP (Laurent) [5min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-coap-static-context-hc/>
- 16:55> New Items (Ana) [5min]
- 17:00> AOB [QS]

Status

WG formed October 14th

- Charter item #1 (Informational document)
 - Baseline technology description
- Charter item #2 (Standards track document)
 - Enable the compression and fragmentation of a CoAP/UDP/IPv6 packet over LPWA networks

Charter - Milestones

Milestones

Date ⇄ **Milestone**

Jul 2017 Submit CoAP compression mechanism to the IESG for publication as a Proposed Standard

May 2017 Submit IP/UDP compression and fragmentation mechanism to the IESG for publication as a Proposed Standard

Apr 2017 Submit LPWAN specification to the IESG for publication as an Informational Document

Done Adopt CoAP compression mechanism as a WG item

Done Adopt IP/UDP compression and fragmentation mechanism as a WG item

Done Adopt LPWAN specifications as WG item

Last meeting Action items

- ~~JCZ, DD: Review IP/UDP drafts~~
- CB, MV: Review CoAP draft
- ~~SF: Send revision, WG to review by May, 30th~~
- ~~CG: CFN/AFN, new ideas around fragmentation~~
- CG: Default fragmentation mode (Window mode)

LPWAN Overview

Editor: Stephen Farrell
(many contributors)

Terminology

- All things fixed – ready for WG call

LPWAN SCHC Fragmentation

Authors:

Ana Minaburo <ana@ackl.io>

Laurent Toutain <laurent.toutain@imt-atlantique.fr>

Carles Gomez <carlesgo@entel.upc.edu>

Status

- Updates since the last interim (24th May)
- Available at <https://github.com/lp-wan/ip-compression>
- Thanks for the input/feedback!

Updates (I/II)

- Packet mode now extracted from SCHC document
 - Now: No ACK, Window mode (ACK “always” and on error)
- Bitmap size lower than $2^N / 8$ bytes allowed
 - E.g. $N=6$ bits, bitmap size of 56 bits (Note: N is the CFN size)
- Multiple window sizes can be supported
 - E.g. to reduce bitmap size to the minimum required for a small packet
 - Via Rule ID

Updates (II/II)

- Updates based on comments by Diego
 - New “Tools” subsection
 - List of Rule IDs used for fragmentation added
 - A fragment, and reliability option
 - No ACK, Window mode – ACK “always”, Window mode – ACK on error
 - An ACK
 - Abort (Tx, Rx, all on-going transmissions)
 - Several minor editorial and technical updates

Thanks!

Comments?

Authors:

Ana Minaburo <ana@ackl.io>

Laurent Toutain <laurent.toutain@imt-atlantique.fr>

Carles Gomez <carlesgo@entel.upc.edu>

SCHC Compression

[draft-ietf-lpwan-ipv6-static-context-hc-03](#)

Authors:

Ana Minaburo ana@ackl.io

Laurent Toutain laurent.toutain@imt-atlantice.fr

Carles Gomez carlesgo@entel.upc.edu

Terminology and Architecture



- Question
 - LPWAN Overview is Informational
 - IP/UDP SCHC is Standard track
- Copy necessary parts on Terminology and Architecture?

SCHC Compression

- Juan Carlos Zuniga review's
 - IID for IPv6 address only ID
 - IPv6 address composed: 64 bit global prefix + 64 bits for Interface Identifier (IID) => (Network Part + Host Part)
 - The IID can be based on:
 - MAC @
 - L2 Identifier
 - Random number
 - Static number
 - IPv4@ ++

SCHC Compression

- Security Part of the draft
 - Do we do 2 parts or only one?
 - For Header Compression:
 - A malicious header compression could cause the reconstruction of a wrong packet that does not match with the original one, such corruption may be detected with end-to-end authentication and integrity mechanisms.
 - Denial of Service may be produced but its arise other security problems that may be solved with or without header compression.
 - More?

LPWAN CoAP SCHC

Authors:

Ana Minaburo <ana@ackl.io>

Laurent Toutain <laurent.toutain@imt-atlantique.fr>

Pretty stable

- CoRE Analysis
 - Security section

- Reviewers!!
 - Need feedback

Next steps for WG

Authors:

Ana Minaburo <ana@ackl.io>

Next steps

- YANG data modeling for SCHC
- Profile Technologies. Develop the different document for each technology in order to define the different parameters.
- Security, all the security solution for the LPWAN
- Rules-ID's management
 - Use to identify some specific cases:
 - Fragmentation
 - Format Values
 - Rule-IDs dedicated for some specific cases as CBOR structure representation, fragmentation, etc
 - The way to use the Rule-Id and their configuration
- ICMP Compression